

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017519**Date Inspected:** 18-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 7E/8E-A and hole restoration, and the following observations were made:

7E/8E-A4

Upon the arrival of the QA Inspector, the ABF welder identified as Fred Kaddu was setting up to perform excavations and weld repairs of previously rejected and indicated weld defects. The QA Inspector randomly observed the ABF welder begin excavating the indicated area of the above identified weld joint. The QA Inspector noted the ABF welder was utilizing a burr bit grinder to perform the weld excavation. The QA Inspector randomly observed the excavations through completion. The QA Inspector performed visual testing and random dimensional verification of the first excavation. The QA Inspector randomly observed the first excavation dimensions to be 140mm X 22mm X 14mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector noted the Y location of the excavation was Y=4430mm-4570mm. The QA Inspector randomly observed the second excavation dimensions to be 160mm X 19mm X 14mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector noted the Y location of the excavation was Y=4000mm-4160mm The QA Inspector randomly observed the second excavation dimensions to be 120mm X 23mm X 14mm deep. The QA Inspector noted the excavation appeared to have been ground and blended to a weldable profile. The QA Inspector noted the Y location of the excavation was Y=1380mm-1500mm. The QA Inspector randomly observed the QC Inspector Tom Pasqualone perform magnetic particle testing of the excavated area to ensure all weld defects had been removed, the QA Inspector noted the QC Inspector did not locate any relevant indications at the time of the testing. The QA

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Inspector randomly observed the ABF welder preheat and begin performing the shielded metal arc welding (SMAW) repair. The QA Inspector randomly observed the ABF welder to be utilizing 1/8" E7018 low hydrogen electrodes with 130 Amps. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift performing the SMAW repair. The QA Inspector noted the SMAW weld repair was completed on the QA Inspectors shift. The QA Inspector noted the above identified repairs were only three out of 23 total rejects to be repaired.

3E-pp23.5-E2-SE

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Wai Kitlai setting up to continue performing the shielded metal arc welding (SMAW) back weld. The QA Inspector previously performed random visual testing and dimensional verification of the bevel angle and root opening of the above identified fit up. The QA Inspector randomly observed the fit up appeared to be in general compliance with ABF-WPS-D1.5-1030. Upon the arrival of the QA inspector, it was noted the SMAW 4G back weld appeared to be approximately 30% complete. The QA Inspector randomly observed the SE QC Inspector John Pagliero was on site monitoring the in process welding. The QA Inspector randomly observed the SMAW parameter were 125 Amps while utilizing 1/8" E7018 low hydrogen electrodes. The QA Inspector noted the SMAW parameters appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder did complete the 4G back weld on this date.

1E-pp10.5-E2-LS-E (485 HPS)

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Hua Qinag Hwang begin setting up to perform the SMAW root pass. The QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the ABF welder had previously installed ceramic backing bar to the backside of the weld joint and held in place with adhesive. The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents.

The QA Inspector randomly observed the ABF welder had previously set up the induction preheating machine and blankets to side of the stiffener opposite the welding. The QA Inspector noted the material must maintain the minimum required preheat of 200°F through out the duration of welding. The QA Inspector randomly observed the ABF welder preheat the area to approximately 230°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the SE QC Inspector John Pagliero was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 123 Amps with 1/8" E9018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector noted the ABF welder did not complete the SMAW on the QA Inspectors shift.

1E-pp13.5-E2-LS-E (485 HPS)

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as Xiao Jian Wan begin setting up to perform the SMAW root pass. The QA Inspector randomly verified the bevel angles and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the

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ABF welder had previously installed ceramic backing bar to the backside of the weld joint and held in place with adhesive. The QA Inspector performed a random visual inspection of the fit up and noted the root opening, bevel angle and planar alignment of the complete joint penetration (CJP) groove weld appeared to meet the general requirements of the contract documents.

The QA Inspector randomly observed the ABF welder had previously set up the induction preheating machine and blankets to side of the stiffener opposite the welding. The QA Inspector noted the material must maintain the minimum required preheat of 200°F through out the duration of welding. The QA Inspector randomly observed the ABF welder preheat the area to approximately 250°F prior to performing any SMAW. After the minimum required preheat had been achieved, the QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector noted the SE QC Inspector John Pagliero was on site to monitor and record the in process production welding at the above identified location. The QA Inspector randomly observed the SMAW parameters to be approximately 135 Amps with 1/8" E9018 low hydrogen electrodes. The QA Inspector randomly observed the in process welding parameters and dimensional tolerances appeared to be in general compliance with the approved welding procedure identified as ABF-WPS-D1.5-1012-3. The QA Inspector noted the ABF welder did not complete the SMAW on the QA Inspectors shift.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
